

SECTION 01 40 00

QUALITY REQUIREMENTS

PART I - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General and Special Provisions of the Contract, including General Conditions and other Division I Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administrative and procedural requirements for quality assurance and quality control.
- B. Testing and inspecting services are required to verify compliance with requirements specified or indicated. These services do not relieve Contractor of responsibility for compliance with the Contract Document requirements.
 - 1. Specific quality- assurance and –control requirements for individual construction activities are specified in the Sections that specify those activities. Requirements in those Sections may also cover production of standard products.
 - 2. Specified tests, inspections, and related actions do not limit Contractor's other quality-assurance and –control procedures that facilitates compliance with the Contract Document requirements.
 - 3. Requirements for Contractor to provide quality-assurance and –control services required by Architect, Owner, or authorities having jurisdiction are not limited by provisions of this Section.
- C. Related Sections include the following:
 - 1. Division I Section "Construction Progress Documentation" for developing a schedule of required tests and inspections.
 - 2. Division I Section "Cutting and Patching."
 - 3. Division 2 through 16 Sections for specific test and inspection requirements.

1.3 DEFINITIONS

- A. Quality-Assurance Services: Activities, actions, and procedures performed before and during execution of the Work to guard against defects and deficiencies and substantiate that proposed construction will comply with requirements.
- B. Quality-Control Services: Tests, inspections, procedures, and related actions during and after execution of the Work to evaluate that actual products incorporated into the Work and completed construction comply with requirements. Services do not include contract enforcement activities performed by Architect.
- C. Preconstruction Testing: Tests and inspections that are performed specifically for the Project before products and materials are incorporated into the Work to verify performance or compliance with specified criteria.
- D. Product Testing: Tests and inspections that are performed by an NRTL, an NVLAP, or a testing agency qualified to conduct product testing and acceptable to authorities having jurisdiction, to establish product performance and compliance with industry standards.

- E. Source Quality-Control Testing: Tests and inspections that are performed at the source, i.e., plant, mill, factory, or shop.
- F. Field Quality-control Testing: Tests and inspections that are performed on-site for installation of the Work and for completed Work.
- G. Testing Agency: An entity engaged to perform specific tests, inspections, or both. Testing laboratory shall mean the same as testing agency.
- H. Installer/Applicator/Erector: Contractor or another entity engaged by Contractor as an employee, Subcontractor, or Sub-subcontractor, to perform a particular construction operation, including installation, erection, application, and similar operations.
 - 1. Using a term such as “carpentry” does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as “carpenter.” It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name,
- I. Experience: when used with an entity, “experienced” or “qualified” means having successfully completed a minimum of 10 previous projects similar in size and scope to this Project; being familiar with special requirements indicated; and having complied with requirements of authorities having jurisdiction.
- J. Licensing: All subcontractors to be State licensed in their area of work

1.4 CONFLICTING REQUIREMENTS

- A. General: If compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
- B. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of requirements. Refer uncertainties to Architect for a decision before proceeding.

1.5 SUBMITTALS

- A. Qualification Data: For testing agencies specified in “Quality Assurance” Article to demonstrate their capabilities and experience. Include proof of qualifications in the form of a recent report on the inspection of the testing agency by a recognized authority.
- B. Schedule of Tests and Inspections: Prepare in tabular form and include the following:
 - 1. Specification Section number and title
 - 2. Description of test and inspection
 - 3. Identification of applicable standards
 - 4. Identification of test and inspection methods
 - 5. Number of tests and inspections required
 - 6. Time schedule or time span for tests and inspections
 - 7. Entity responsible for performing tests and inspections
 - 8. Requirements for obtaining samples
 - 9. Unique characteristics of each quality-control service
- C. Reports: Prepare and submit certified written reports that include the following:

1. Date of issue
 2. Project title and number
 3. Name, address, and telephone number of testing agency
 4. Dates and locations of samples and tests or inspections
 5. Names of individuals making tests and inspections
 6. Description of the Work and test and inspection method
 7. Identification of product and Specification Section
 8. Complete test or inspection data
 9. Test and inspection results and an interpretation of test results
 10. Record of temperature and weather conditions at time of sample taking and testing and inspecting
 11. Comments or professional opinion on whether tested or inspected Work complies with the Contract Document requirements
 12. Names and signature of laboratory inspector
 13. Recommendations on retesting and reinspecting
- D. Permits, Licenses, and Certificates: For Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, correspondence, records, and similar documents, established for compliance with standards and regulations bearing on performance of the Work.

1.6 QUALITY ASSURANCE

- A. General: Qualifications paragraphs in this Article establish the minimum qualification levels required; individual Specification Sections specify additional requirements.
- B. Installer Qualifications: A firm or individual experienced in installing, erecting, or assembling work similar in material, design, and extent to that indicated for this Project, whose work has resulted in construction with a record of successful in-service performance.
- C. Manufacturer Qualifications: A firm experienced in manufacturing products or systems similar to those indicated for this Project and with a record of successful in-service performance, as well as sufficient production capacity to produce required units.
- D. Fabricator Qualifications: A firm experienced in producing products similar to those indicated for this Project and with a record of successful production capacity to produce required units.
- E. Professional Engineer Qualifications: A professional engineer who is legally qualified to practice in jurisdiction where Project is located and who is experienced in providing engineering services of the kind indicated. Engineering services are defined as those performed for installations of the system, assembly, or product that are similar to those indicated for this Project in materials, design, and extent.
- F. Specialists: Certain Sections of the Specifications require that specific construction activities shall be performed by entities who are recognized experts in those operations. Specialists shall satisfy qualification requirements indicated and shall be engaged for the activities indicated.
1. Requirement for specialists shall not supersede building codes and regulations governing the Work.
- G. Testing Agency Qualifications: An NRTL, an NVLAP, or an independent agency with the experience and capability to conduct testing and inspecting indicated, as documented according to ASTM E 548; and with additional qualifications specified in individual Sections; and where required by authorities having jurisdiction, that is acceptable to authorities.
1. NRTL: A nationally recognized testing laboratory according to 29 CFR 1910.7

2. NVLAP: A testing agency accredited according to NIST's National Voluntary Laboratory Accredited Program

H. Factory-Authorized Service Representative Qualifications: An authorized representative of manufacturer who is trained and approved by manufacturer to inspect installation of manufacturer's product that are similar in material, design, and extent to those indicated for this Project.

1.7 QUALITY CONTROL

A. Owner Responsibilities: Owner will employ and pay for the City of San Jose Materials Testing Laboratory to perform inspections, tests, and other services required by applicable codes and various Specification sections.

1. Owner or Architect may also require independent testing of items where doubts exists that product or system does not conform to Contract Documents.
2. Owner will employ and pay for testing laboratory to provide Project specific testing under applicable codes and Specification sections except where indicated otherwise.

a. Owner employment of testing laboratory shall not relieve Contractor of obligation to perform Work in accordance with requirements of applicable codes and Contract Documents.

1) Laboratory may not release, revoke, alter, or enlarge on requirements of Contract Documents.

b. Retesting required because of non-conformance to specified requirements shall be performed by Owner's testing laboratory.

1) Payment for retesting shall be charged to Contractor by deducting inspection and testing charges from Contractor amount.

c. Owner provided testing shall be limited to Project specific testing and shall not include general tests or approvals of materials, equipment or systems.

3. Coordinate with Owner to determine inspections for rough-ins and other work which require Owner General Services personnel to be present at inspections.

B. Contractor Quality Control System:

1. Establish a quality control system to perform sufficient inspections and tests of all items of work, including that of all subcontractors, to ensure conformance with the Contract Documents for materials, workmanship, construction, finish, functional performance and identification. Controls shall be adequate to cover all construction operations.

2. Manufactured articles, materials and equipment shall be applied, installed, connected, erected, used, cleaned, adjusted, and conditioned in compliance with their manufacturer's latest published instructions, unless more restrictive or stringent requirements are specified in the Contract Documents.

a. If product manufacturer's instructions are in conflict with the Contract Documents, notify the City for clarifications before proceeding.

b. At the project site, keep a copy of the various product manufacturers instructions applicable to the work.

C. Tests and inspections not explicitly assigned to Owner are Contractor's responsibility. Unless otherwise indicated, provide quality-control services specified and those required by authorities

having jurisdiction. Perform quality-control services required of Contractor by authorities having jurisdiction, whether specified or not.

1. Where services are indicated as Contractor's responsibility, engage a qualified testing agency to perform these quality control services.
 - a. Contractor shall not employ same entity engaged by Owner, unless agreed to in writing by Owner.
 2. Notify testing agencies at least 48 hours in advance of time when Work that requires testing or inspecting will be performed.
 3. Where Quality-control services are indicated as Contractor's responsibility, submit a certified written report, in duplicate, of each quality-control service.
 4. Testing and inspecting requested by Contractor and not required by the Contract Documents are Contractor's responsibility.
 5. Submit additional copies of each written report directly to authorities having jurisdiction, when they so direct.
 6. Contractor shall notify Owner 5 days prior to special inspection.
- D. Manufacturer's Field Services: Where indicated, engage a factory-authorized service representative to inspect field-assembled components and equipment installation, including service connections. Report results in writing as specified in Division I Section "Submittal Procedures."
- E. Retesting/Reinspecting: Regardless of whether original tests or inspections were Contractor's responsibility, provide quality-control services, including retesting and reinspection, for construction that replaced Work that failed to comply with the Contract Documents.
- F. Testing Agency Responsibilities: Cooperate with Architect and Contractor in performance of duties. Provide qualified personnel to perform required tests and inspections.
1. Notify Architect and Contractor promptly of irregularities or deficiencies observed in the Work during performance of its services.
 2. Determine the location from which test samples will be taken and in which in-situ tests are conducted.
 3. Conduct and interpret tests and inspections and state in each report whether tested and inspected work complies with or deviated from requirements.
 4. Submit a certified written report, in duplicate, of each test, inspection and similar quality-control service through Contractor.
 5. Do not release, revoke, alter, or increase the Contract Document requirements or approve or accept any portion of the Work.
 6. Do not perform any duties of Contractor.
- G. Associated Services: Cooperate with agencies performing required tests, inspections, and similar quality-control services, and provide reasonable auxiliary services as requested. Notify agency sufficiently in advance of operations to permit assignment of personnel. Provide the following:
1. Access to the Work.
 2. Incidental labor and facilities necessary to facilitate tests and inspections.
 3. Adequate quantities of representative samples of materials that require testing and inspecting. Assist agency in obtaining samples.
 4. Facilities for storage and field curing of test samples.
 5. Delivery of samples to testing agency.
 6. Preliminary design mix proposed for use for material mixes that require control by testing agency.

7. Security and protection for samples and for testing and inspecting equipment at Project site.
- H. Coordination: Coordinate sequence of activities to accommodate required quality-assurance and –control services with a minimum of delay and to avoid necessity of removing and replacing construction to accommodate testing and inspecting.
 1. Schedule times for tests, inspections, obtaining samples, and similar activities.
- I. Schedule of Tests and Inspections: Prepare a schedule of tests, inspections, and similar quality-control services required by the Contract Documents. Submit schedule within 30 days of date established for the Notice to Proceed.
 1. Distribution: Distribute schedule to Owner, Architect, testing agencies, and each party involved in performance of portions of the Work where tests and inspections are required.

1.8 SPECIAL TESTS AND INSPECTIONS

- A. Special Tests and Inspections: Conduct by a qualified testing agency or special inspector as required by authorities having jurisdiction, as indicated in individual Specification Sections, and as follows:
 1. Verifying that manufacturer maintains detailed fabrication and quality-control procedures and reviewing the completeness and adequacy of those procedures to perform the Work.
 2. Notifying Architect and Contractor promptly of irregularities and deficiencies observed in the Work during performance of its services.
 3. Submitting a certified written report of each test, inspection, and similar quality-control service to Architect with copy to Contractor and to authorities having jurisdiction.
 4. Submitting a final report of special tests and inspections at Substantial Completion, that includes a list of unresolved deficiencies.
 5. Interpreting tests and inspections and stating in each report whether tested and inspected work complies with or deviates from the Contract Documents.
 6. Retesting and reinspecting corrected work.

1.9 INDOOR AIR QUALITY (IAQ)

- A. Provide designated on-site IAQ managers for instruction of workers and to oversee and fulfill the requirements of the IAQ Management Plan for the Project.
- B. Submit specific emissions sources for this Project as described in the IAQ Management Plan.
- C. Submit photographs of construction IAQ Management measures and cut sheets of filtration media with values highlighted.
- D. It is important to keep construction materials covered and protected from moisture and debris. Ductwork shall be wiped down (inside and out) prior to installation. When ductwork is installed, open ends shall be covered to prevent debris accumulation.
- E. Contractor to conduct an IAQ Management Plan review meeting.
- F. Contractor shall include IAQ in weekly construction meeting agenda to discuss IAQ concerns.
- G. Perform two-week construction area flush out with 100% outside air. The flush out is to occur after construction and before occupancy. HVAC, hydronic heating, and control systems should be fully functional before the flush out begins. The building flush out shall be tended by the HVAC systems controls to verify compliance. New filtration media shall be installed in the HVAC

systems controls to verify compliance. New filtration media shall be installed in the HVAC system prior to and after the flush out.

H. The Contractor shall provide cut sheets for filtration media used during flush out.

PART 2 – PRODUCTS

PART 3 – EXECUTION

3.1 TEST AND INSPECTION LOG

- A. Prepare a record of tests and inspections. Include the following:
 - 1. Date test or inspection was conducted.
 - 2. Description of the Work tested or inspected.
 - 3. Date of test or inspection results were transmitted to Architect
 - 4. Identification of testing agency or special inspector conducting test or inspection.
- B. Maintain log at Project site. Post changes and modifications as they occur. Provide access to test and inspection log for Architect's reference during normal working hours.
- C. Vapor Emission Testing: Provided Contractor:
 - 1. The number of test kits required is determined by the square footage of the facility. Three test kits are required in areas up to 1,000 sq. ft. Add an additional test for each 1,000 sq. ft. or fraction thereof.
- D. Alkalinity Testing: Provided Contractor:
 - 1. The number of test kits required is determined by the square footage of the facility. Three test kits are required in areas up to 1,000 sq. ft. Add an additional test for each 1,000 sq. ft. or fraction thereof.
- E. Reports on Vapor Emission Testing and Alkalinity Testing: Make daily reports, including a building diagram to identify each testing location, date and time of tests, with calculation. Upon completion of testing, compile a comprehensive report covering activities performed under this section and deliver a copy to:
 - a. Owner/City
 - b. Architect
 - c. Contractor

3.2 REPAIR AND PROTECTION

- A. General: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
 - 1. Provide materials and comply with installation requirements specified in other Specification Sections. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible.
 - 2. Comply with the Contract Document requirements for Division I Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities.

1. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

3.3 ASBESTOS CERTIFICATION FORM

- A. For all products/materials included in the Work, a copy the attached form, Asbestos Certification, shall be submitted at Substantial Completion.

PART 4 – MEASUREMENT AND PAYMENT

- 4.1 Separate measurement or payment will not be made for work required under this Section. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Schedule of Values, incorporated into the General Conditions or incidental to the Work of this Contract.

END OF SECTION 01 40 00

ASBESTOS CERTIFICATION

Project: _____ Date _____

EXECUTION

The undersigned certifies that to the best of his/her knowledge that the above referenced Project does not include any products or materials containing asbestos.

I declare under penalty of perjury under the laws of the State of California, that the foregoing is correct.

License Number: _____ Type(s): _____

Contractor's Telephone Number: _____

Contractor's Facsimile Number: _____

I _____, being first duly sworn, says that all statements
Name

contained in this certification are accurate and that this certification contains no false or deliberately misleading information.

Contractor

Printed Name

Signature

Subscribed and sworn to before me this _____ day of _____, 20____

Notary Public in and for the State of _____

Residing at: _____

Expiration Date: _____

SECTION 01 42 00

DEFINITIONS, REFERENCES, AND REGULATIONS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General and Special Provisions of the Contract, including General Conditions and other Division I Specification Sections, apply to this Section.

1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the General Conditions of the Contract.
- B. "Approved": The term "approved," when used in conjunction with Architect's action on Contractor's submittals, applications, and requests, is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": Terms such as "directed," "requested," "authorized," "selected," "approved," "required," and "permitted" mean directed by Owner, Construction Manager, or Architect, requested by Owner, Construction Manager or Architect, and similar phrases.
- D. "Indicated": The term "indicated" refers to graphic representations, notes, or schedules on Drawings; or to other paragraphs or schedules in Specifications and similar requirements in the Contract Documents. Terms such as "shown," "noted," "scheduled," and "specified" are used to help the user locate the reference.
- E. "Regulations": The term "regulations" includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": The term "furnish" means to supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. "Install": The term "install" describes operations at Project site including unloading, temporary storage, unpacking, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. "Provide": The term "provide" means to furnish and install, complete and ready for the intended use.
- I. "Installer": An installer is Contractor or another entity engaged by Contractor, as an employee, subcontractor, or contractor of lower tier, to perform a particular construction operation, including installation, erection, application, and similar operations.
- J. The term "experienced," when used with the term "installer," means having successfully completed a minimum of three previous projects similar in size and scope to this Project; being fa-

miliar with the special requirements indicated; and having complied with requirements of authorities having jurisdiction.

1. Using a term such as "carpentry" does not imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as "carpenter." It also does not imply that requirements specified apply exclusively to tradespeople of the corresponding generic name.

- K. "Project site" is the space available for performing construction activities, either exclusively or in conjunction with others performing other work as part of Project. The extent of Project site is shown on the Drawings and may or may not be identical with the description of the land on which Project is to be built.

1.3 INDUSTRY STANDARDS

- A. Applicability of Standards: Unless the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect as if bound or copied directly into the Contract Documents to the extent referenced. Such standards are made a part of the Contract Documents by reference.
- B. Publication Dates: Comply with standards in effect as of the date of the Contract Documents, unless otherwise indicated.
- C. Conflicting Requirements: Where compliance with two or more standards is specified and the standards establish different or conflicting requirements for minimum quantities or quality levels, comply with the most stringent requirement. Refer uncertainties and requirements that are different, but apparently equal, to Architect for a decision before proceeding.
1. Minimum Quantity or Quality Levels: The quantity or quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. To comply with these requirements, indicated numeric values are minimum or maximum, as appropriate, for the context of the requirements. Refer uncertainties to Architect for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on Project must be familiar with industry standards applicable to its construction activity. Copies of applicable standards are not bound with the Contract Documents.
1. Where copies of standards are needed to perform a required construction activity, obtain copies directly from the publication source and make them available on request.
- E. Abbreviations and Names: Abbreviations and acronyms are frequently used in the Specifications and other Contract Documents to represent the name of a trade association, standards-developing organization, authorities having jurisdiction, or other entity in the context of referencing a standard or publication. Where abbreviations and acronyms are used in the Specifications or other Contract Documents, they mean the recognized name of these entities. Refer to Gale Research's "Encyclopedia of Associations" or Columbia Books' "National Trade & Professional Associations of the U.S.," which are available in most libraries.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturers Association
AAN	American Association of Nurserymen (See ANLA)

AASHTO	American Association of State Highway and Transportation Officials
ABMA	American Boiler Manufacturers Association
ACI	American Concrete Institute
ACPA	American Concrete Pipe Association
ADC	Air Diffusion Council
AFPA	American Forest and Paper Association (Formerly: National Forest Products Association)
AGA	American Gas Association
AHA	American Hardboard Association
AI	Asphalt Institute
AIA	The American Institute of Architects
AIA	American Insurance Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AITC	American Institute of Timber Construction
ALA	American Laminators Association (See LMA)
ALCA	Associated Landscape Contractors of America
ALI	Associated Laboratories, Inc.
ALSC	American Lumber Standards Committee
AMCA	Air Movement and Control Association International, Inc.
ANLA	American Nursery and Landscape Association (Formerly: American Association of Nurserymen)
ANSI	American National Standards Institute
APA	APA-The Engineered Wood Association (Formerly: American Plywood Association)
APA	Architectural Precast Association
APHA	American Public Health Association
ARI	Air-Conditioning and Refrigeration Institute
ARMA	Asphalt Roofing Manufacturers Association
ASA	Acoustical Society of America
ASC	Adhesive and Sealant Council
ASCA	Architectural Spray Coaters Association
ASCE	American Society of Civil Engineers
ASHRAE	American Society of Heating, Refrigerating and
ASLA	American Society of Landscape Architects
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASQ	American Society for Quality
ASSE	American Society of Sanitary Engineering
ASTM	American Society for Testing and Materials
ATIS	Alliance for Telecommunications Industry Solutions (Formerly: Exchange Carriers Standards Association)
AWCI	Association of the Wall and Ceiling Industries—International
AWCMA	American Window Covering Manufacturers Association (See WCMA)
AWI	Architectural Woodwork Institute
AWPA	American Wood-Preservers' Association
AWPB	American Wood Preservers' Bureau (This organization is now defunct.)
AWS	American Welding Society
AWWA	American Water Works Association
BAC	Brick Association of the Carolinas (Formerly: Brick Association of North Carolina)
BHMA	Builders Hardware Manufacturers Association
CAGI	Compressed Air and Gas Institute
CBMA	Certified Ballast Manufacturers Association
CCC	Carpet Cushion Council
CGA	Compressed Gas Association

CISCA	Ceilings and Interior Systems Construction Association
CISPI	Cast Iron Soil Pipe Institute
CLFMI	Chain Link Fence Manufacturers Institute
CPA	Composite Panel Association (Formerly: National Particleboard Association)
CRI	Carpet and Rug Institute
CRSI	Concrete Reinforcing Steel Institute
CTI	Ceramic Tile Institute of America
DASMA	Door and Access Systems Manufacturers Association, International (Formerly: National Association of Garage Door Manufacturers)
DHI	Door and Hardware Institute (Formerly: National Builders Hardware Association)
DIPRA	Ductile Iron Pipe Research Association
DLPA	Decorative Laminate Products Association (Dissolved in 1995 - Now part of KCMA.)
ECSA	Exchange Carriers Standards Association (See ATIS)
EIA	Electronic Industries Association
EJMA	Expansion Joint Manufacturers Association
FCI	Fluid Controls Institute
FCICA	Floor Covering Installation Contractors Association
FGMA	Flat Glass Marketing Association (See GANA)
FHWA	Federal Highway Administration
FM	Factory Mutual System
GA	Gypsum Association
GANA	Glass Association of North America (Formerly: Flat Glass Marketing Association)
HI	Hydronics Institute Division of Gas Appliance Manufacturers Association
HMA	Hardwood Manufacturers Association (Formerly: Southern Hardwood Lumber Manufacturers Ass)
HPVA	Hardwood Plywood and Veneer Association
ICEA	Insulated Cable Engineers Association
IEC	International Electrotechnical Commission (Available from ANSI)
IEEE	Institute of Electrical and Electronics Engineers
IESNA	Illuminating Engineering Society of North America
IGCC	Insulating Glass Certification Council
INCE	Institute of Noise Control Engineering
ISA	ISA - International Society for Measurement and Control
ISEA	Industrial Safety Equipment Association
ISS	Iron and Steel Society
KCMA	Kitchen Cabinet Manufacturers Association (Formerly: National Kitchen Cabinet Association)
LGSI	Light Gage Structural Institute
LMA	Laminating Materials Association (Formerly: American Laminators Association)
LPI	Lightning Protection Institute
MBMA	Metal Building Manufacturers Association
MCAA	Mechanical Contractors Association of America
MFMA	Maple Flooring Manufacturers Association (Formerly: Wood and Synthetic Flooring Institute)
MFMA	Metal Framing Manufacturers Association
MIA	Marble Institute of America

MIA	Masonry Institute of America
ML/SFA	Metal Lath/Steel Framing Association
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAA	National Arborist Association
NAAMM	National Association of Architectural Metal Manufacturers
NAAMM	North American Association of Mirror Manufacturers (See GANA)
NACE	NACE International (Formerly: National Association of Corrosion Engineers)
NAIMA	North American Insulation Manufacturers Association (Formerly: Thermal Insulation Manufacturers Ass)
NAPA	National Asphalt Pavement Association
NBHA	National Builders Hardware Association (See DHI)
NCAC	National Council of Acoustical Consultants
NCCA	National Coil Coaters Association
NCMA	National Concrete Masonry Association
NEBB	Natural Environmental Balancing Bureau
NECA	National Electrical Contractors Association
NEI	National Elevator Industry
NEMA	National Electrical Manufacturers Association
NETA	InterNational Electrical Testing Association
NFPA	National Fire Protection Association
NFPA	National Forest Products Association (See AFPA)
NFRC	National Fenestration Rating Council Incorporated
NGA	National Glass Association
NHLA	National Hardwood Lumber Association
NIA	National Insulation Association (Formerly: National Insulation and Abatement Contractors Association)
NIAC	National Insulation and Abatement Contractors Association (See NIA)
NKCA	National Kitchen Cabinet Association (See KCMA)
NLGA	National Lumber Grades Authority
NPCA	National Paint and Coatings Association
NRCA	National Roofing Contractors Association
NRMCA	National Ready Mixed Concrete Association
NSF	NSF International (Formerly: National Sanitation Foundation)
NSSEA	National School Supply and Equipment Association
NTMA	National Terrazzo and Mosaic Association
NUSIG	National Uniform Seismic Installation Guidelines
NWMA	National Woodwork Manufacturers Association (See NWWDA)
NWWDA	National Wood Window and Door Association (Formerly: National Woodwork Manufacturers Association)
PCA	Portland Cement Association
PCI	Precast / Prestressed Concrete Institute
PDCA	Painting and Decorating Contractors of America
PDI	Plumbing and Drainage Institute
PGI	PVC Geomembrane Institute/Technology Program
PPFA	Plastic Pipe and Fittings Association
PPI	Plastics Pipe Institute (The Society of the Plastics Industry, Inc.)
RCMA	Roof Coatings Manufacturers Association
RFCI	Resilient Floor Covering Institute
RMA	Rubber Manufacturers Association
SAE	SAE International
SDI	Steel Deck Institute
SDI	Steel Door Institute

SGCC	Safety Glazing Certification Council
SIGMA	Sealed Insulating Glass Manufacturers Association
SMA	Screen Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractors' National Association
SPI	The Society of the Plastics Industry, Inc.
SPRI	SPRI (Formerly: Single Ply Roofing Institute)
SSINA	Specialty Steel Industry of North America
SSPC	SSPC: The Society for Protective Coatings
STI	Steel Tank Institute
SWRI	Sealant, Waterproofing and Restoration Institute
TCA	Tile Council of America
TIMA	Thermal Insulation Manufacturers Association (See NAIMA)
UL	Underwriters Laboratories Inc.
WA	Wallcoverings Association
WCMA	Window Covering Manufacturers Association (Formerly: American Window Covering Manufacturers Ass)
WEF	Water Environment Federation (Formerly: Water Pollution Control Federation)
WIC	Woodwork Institute of California
WMMPA	Wood Moulding & Millwork Producers Association
WPCF	Water Pollution Control Federation (See WEF)
WRI	Wire Reinforcement Institute
WSC	Water Systems Council
WSFI	Wood and Synthetic Flooring Institute (See MFMA)
WWPA	Western Wood Products Association

- F. Federal Government Agencies: Names and titles of Federal Government standards- or specification-developing agencies are often abbreviated. The following abbreviations and acronyms referenced in the Contract Documents indicate names of standards- or specification-developing agencies of the Federal Government. Names are subject to change and are believed, but are not assured, to be accurate and up-to-date as of the date of the Contract Documents.

CFR	Code of Federal Regulations (Available from the Government Printing Office)
CPSC	Consumer Product Safety Commission
CS	Commercial Standard (U.S. Department of Commerce)
DOC	Department of Commerce
DOT	Department of Transportation
EPA	Environmental Protection Agency
FAA	Federal Aviation Administration (U.S. Department of Transportation)
FCC	Federal Communications Commission
NIST	National Institute of Standards and Technology (U.S. Department of Commerce)
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor)
PS	Product Standard of NBS (U.S. Department of Commerce)
USPS	U.S. Postal Service

- G. State Government Agencies: The following state government agencies develop standards referenced in the Contract Documents:

CBHF	State of California, Department of Consumer Affairs Bureau of Home Furnishings and Thermal Insulation
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1.5 GOVERNING REGULATIONS

- A. All Work to be in strict conformance with requirements of all applicable codes, ordinances, and other regulations, including the following:
1. California Code of Regulations, Title 19 - Public Safety
 2. California Code of Regulations, Title 21 - Public Works
 3. California Code of Regulations, Title 24 - Building Standards
 - a. 2001 California Building Standards Administrative Code (Title 24, Part 1).
 - b. 2001 California Building Code (Title 24, Part 2).
 - c. 2001 California Electrical Code (Title 24, Part 3).
 - d. 2001 California Plumbing Code (Title 24, Part 4).
 - e. 2004 California Energy Code (Title 24, Part 6).
 - f. 2001 California Elevator Safety Construction Code (Title 24, Part 7).
 - g. 2001 California Historical Building Code (Title 24, Part 8).
 - h. 2001 California Fire Code (Title 24, Part 9).
 - i. 2001 California Code for Building Conservation (Title 24, Part 10).
 - j. 2001 California Referenced Standards Code (Title 24, Part 12).
- B. Nothing in these Contract Documents shall be construed to permit work not in conformance with applicable codes and regulations. Notify Architect and Project Inspector promptly in writing if there is reason to believe that any portion of Contract Documents is at variance with any applicable codes and regulations.

1.6 SUBMITTALS

- B. Permits and Licenses: Submit copies of permits, licenses, inspection reports, certifications, and other similar documents pertaining to compliance with applicable standards and regulations.

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

PART 4 - MEASUREMENT AND PAYMENT

- 4.1 Separate measurement or payment will not be made for work required under this Section. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Schedule of Values, incorporated into the General Conditions or incidental to the Work of this Contract.

END OF SECTION 01 42 00

SECTION 01 50 00

TEMPORARY FACILITIES AND CONTROL

PART I - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General and Special Provisions of the Contract, including General and Conditions other Division I Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities:

1.3 USE CHARGES

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.

1.4 SUBMITTALS
(Not Used)

1.5 QUALITY ASSURANCE

- A. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

1.6 PROJECT CONDITIONS

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Paint: comply with requirements in Division 9.

2.2 TEMPORARY FACILITIES

- A. Meeting facilities will be provided by the City for any required project meetings.

2.3 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Noise and Vibration Control:
 - 1. Take appropriate measures to minimize noise from construction operations. Comply with applicable regulatory requirements.

2. Comply with specified requirements and applicable regulatory requirements for operation of equipment on or related to job including, but not limited to, trucks and transient equipment.
3. Equipment shall have intake and exhaust mufflers with “new” or “quiet technology” to minimize noise.
4. Cooperate with Building Manager if use of noisy and vibratory equipment, impact tools, and high frequency electrical equipment becomes objectionable.
5. Use of radios and similar devices is prohibited.
6. Dust Control: Execute work by methods to minimize raising dust from construction operations.

PART 3 – EXECUTION

3.1 INSTALLATION, GENERAL

- A. Location of any temporary facilities to be approved by Architect and Owner.

3.2 TEMPORARY UTILITY INSTALLATION (Not Used)

3.3 SUPPORT FACILITIES INSTALLATION

- A. Traffic Controls: Comply with requirements of authorities having jurisdiction.
1. Protect existing site improvements to remain.
 2. Maintain access for fire-fighting equipment.
- B. Project Identification and Temporary Signs: Contractor may provide Project identification and other signs. Install signs where indicated to inform public and individuals seeking entrance to Project. Unauthorized signs are not permitted.
1. Provide temporary, directional signs for construction personnel and visitors.
 2. Maintain and touchup signs so they are legible at all times.
 3. Provide Project Identification sign per the sample detail at the end of this section.
 - a. Submit wording for review and approval by the City prior to fabrication.
- C. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with requirements of Section 01700 “Execution Requirements” for progress cleaning requirements.
- D. Lifts and Hoists: Provide facilities necessary for hoisting materials and personnel.

3.3 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
1. Comply with work restrictions specified in Division I Section “Summary.”
- B. Site Enclosure Barrier: Furnish and install site enclosure barrier in a manner that will prevent people from easily entering site except by entrance gate(s).

1. Extent of Barrier: As required to enclose entire Project site or portion determined sufficient to accommodate construction operations.
 2. Maintain security by limiting number of keys and restricting distribution to authorized personnel.
- C. Security Enclosure and Lockup: Install temporary barrier around partially completed areas of construction. Provide lockable entrances to prevent unauthorized entrance, vandalism, theft, and similar violations of security.
- D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- E. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
1. Prohibit smoking in construction areas.
 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.

3.4 OPERATIONS, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. "Quiet Package" construction equipment consisting of compressors and generators will be used to the greatest practical extent, and will be located as far away as possible from businesses, residences or noise-sensitive land uses.
- C. No smoking will be permitted in indoor project site locations, per California Labor Code and LEED indoor environmental quality criteria.
- D. Protect existing facilities and systems. Provide temporary protection for existing facilities as specified for installed work. Promptly replace or repair existing facilities damaged as a result of construction activities.
- E. Cleaning during Construction:
1. At least once a week, or more often as required, clean site and buildings and dispose of waste materials, debris and rubbish off the site. Remove combustible materials such as paper and cardboard.
 2. Do not allow debris and combustible materials to accumulate in voids, cavities, interstitial spaces, and plenums created by wall, partition, and ceiling construction. These areas must be thoroughly cleaned out before being sealed or closed off by installation of finished materials.
 3. Vacuum clean interior areas when ready to be painted.
- F. Conference Room T133 can be used to store material prior to installation. Coordinate with Building Manager. This room is also available for project meetings.

- G. Maintenance: Maintain facilities in good operating condition until removal.
 - 1. Maintain operation of temporary enclosures, heating, cooling, humidity control, ventilation, and similar facilities on a 24-hour basis where required to achieve indicated results and to avoid possibility of damage.
- H. Temporary Facility Changeover: Do not change over from using temporary security and protection facilities to permanent facilities until Substantial Completion.
- I. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
 - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
 - 2. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division I Section "Closeout Procedures."

PART 4 – MEASUREMENT AND PAYMENT

- 4.1 Separate measurement or payment will not be made for work required under this Section. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Schedule of Values, incorporated into the General Conditions or incidental to the Work of this Contract.

END OF SECTION 01 50 00

SECTION 01 50 50

MOBILIZATION

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

- A. Drawings, General and Special Provisions of the Contract, including General Conditions and other Division I Specification Sections, apply to this Section.

1.02 SUMMARY

- A. This Section includes Contractor's work to prepare Site for Work under Contract and to marshal workers, materials and equipment and those of subcontractors to accomplish Work under Contract.
- B. Mobilization shall include mobilization of all construction equipment, materials, suppliers, appurtenances, and the like, staffed and ready for commencing and prosecuting the Work; and the subsequent demobilization and removal from the site of said equipment, appurtenances, and the like upon completion of the Work.
- C. Mobilization shall also include assembly and delivery to the site of equipment, materials, and supplies necessary for the prosecuting of work which are not intended to be incorporated in the work; the clearing of and preparation of the Contractor's work area; the complete assembly, in working order, of equipment necessary to perform the required work; personnel services preparatory to commencing actual work; all other preparatory work required to permit commencement of the actual work on construction items for which payment is provided under the Contract.

1.03 REQUIREMENTS

- A. Haul routes, staging areas, and security guard and flagger positions will be designated and/or subject to approval by Owner who will coordinate with Contractor to determine requirements and locations. Any area that is provided by Contractor off-site shall be at Contractor's expense.
- B. Cooperate with Owner in allocation and use of mobilization areas of site, field offices and sheds, materials storage, traffic, and parking facilities.
- C. During construction, coordinate use of site and facilities through Owner.
- D. Comply with Owner's procedures of contract communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
- E. Comply with instructions of Owner for use of utilities and construction facilities.
- F. Coordinate field engineering and layout work under instructions of Owner.

1.04 SUBMITTALS

- A. Refer to Section 01300, Submittals, for submittal requirements.
- B. Submit a plan of the proposed layout of the construction site defining the Contractor's laydown area requirements, including barriers, staging, and storage areas, within seven (7) days after

Notice to Proceed. The Drawing of the Contractor's laydown area, provides an indication of the on-site area available to Contractor for said purpose.

1.05 DELIVERY

Delivery to the jobsite of construction tools, equipment, materials, and supplies shall be accomplished in conformance with local governing ordinances and regulations and the requirements of the Contract Documents. All deliveries shall be made through the City Hall Loading Dock. Alternate delivery access may be arranged through the Owner's project manager and the Building Manager.

1.06 TOOLS AND SUPPLIES

- A. Provide construction tools, equipment, materials, and supplies of the types and quantities necessary to facilitate the timely execution of the work.
- B. Provide personnel, products, construction, materials, equipment tools, and supplies at the jobsite at the time they are scheduled to be installed or utilized.

1.07 DEMOBILIZATION

Upon completion of the work, remove construction tools, apparatus, equipment, unused materials and supplies, plant, and personnel from the jobsite. Deliver to the Owner surplus salvaged materials, equipment, and Owner provided materials and equipment at the location designated by the Owner.

PART 2 - PRODUCTS

Not used.

PART 3 - EXECUTION

Not used.

PART 4 - MEASUREMENT AND PAYMENT

4.01 MEASUREMENT

- A. Mobilization will be measured for payment as a lump sum unit, acceptably performed.

4.02 PAYMENT

- A. The Contract lump sum price for mobilization shall not be greater than five (3.0) percent of the Total Base Bid amount.
- B. The Contract lump sum price for mobilization will be paid as follows:
 - 1. Forty five percent of the mobilization lump sum price will be paid with each of the first two monthly invoices. The remaining 10 percent will be held until demobilization is complete.
 - 2. Payments for mobilization will be made only when such activities occur as planned and as indicated in the Contractor's approved schedules.

END OF SECTION 01 50 50

SECTION 01 60 00

PRODUCT REQUIREMENTS

PART I - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, General and Special Provisions of the Contract, including General Conditions and other Division I Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes administration and procedural requirements for selection of products for use in Project; project delivery, storage, and handling; manufacturers' standard warranties on products; special warranties; product substitutions; and comparable products.
- B. Related Sections
 - 1. Division I Section "Warranties" for submitting warranties for Contract closeout.
 - 2. Division 2 through 16 Sections for specific requirements for warranties on products and installations specified to be warranted.

1.3 DEFINITIONS

- A. Products: Items purchased for incorporating into the Work, whether purchased for Project or taken from previously purchased stock. The term "product" includes the terms, "materials," "equipment," "system," and terms of similar intent.
 - 1. Named Products: Items identified by manufacturer's product name, including make or model number or other designation shown or listed in manufacturer's published product literature, that is current as of date of the contract Documents.
 - 2. New Products: Items that have not previously been incorporated into another project or facility, except that, products consisting of recycled-content materials are allowed, unless explicitly stated otherwise. Products salvaged or recycled from other projects are not considered new products.
 - 3. Comparable Product: Product that is demonstrated and approved through submittal process, or where indicated as a product substitution, to have the indicated qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics that equal or exceed those of specified product.
- B. Substitution: Changes in products, materials, equipment, and methods of construction from those required by the Contract Documents and proposed by Contractor.
 - 1. Wherever more than one manufacturer's product is specified, the first-named product is the basis for the design used in the work. The subsequent listings and the use of alternative-named manufacturers' products are substitutions.
- C. Product Listings: The first product listed is the specified product. Subsequent products are considered substitutions. Contractor must follow requirements and procedures for substitutions if other than first product is proposed.
- D. Basis-of-Design Product Specification: Where a specific manufacturer's product is named and accompanied by the words "basis of design," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service

performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of other named manufacturers.

1.4 SUBMITTALS

- A. Product List: Submit a list, in tabular form, showing specified products. Include generic names of products required. Include manufacturer's name and proprietary product names for each product.
 - 1. Coordinate product list with Contractor's Construction Schedule and the Submittals Schedule.
 - 2. Form: Tabulate information for each product under the following column headings.
 - a. Specification Section number and title.
 - b. Generic name used in the Contract Documents.
 - c. Proprietary name, model number, and similar designations.
 - d. Manufacturer's name and address.
 - e. Supplier's name and address.
 - f. Installer's name and address.
 - g. Identification of items that require early submittal approval for scheduled delivery date.
 - 3. Completed List: Within 20 calendar days after Notice to Proceed of the Work, submit 7 copies of completed product list. Include a written explanation for omissions of data and for variations from Contract requirements.
 - 4. Architect's Action: Architect will respond in writing to Contractor 14 calendar days of receipt of completed product list. Architect's response will include a list of unacceptable product selections and a brief explanation of reasons for this action. Architect's response, or lack of response, does not constitute a waiver of requirements to comply with the Contract Documents.
- B. Substitution Requests: Submit 7 copies to Architect and 1 copy to Owner of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and drawing numbers and titles.
 - 1. Substitution Request Form: Use form provided by Owner provided at the end of Section and submit within the allowed time noted in Part 2.
 - 2. Documentation: Show compliance with requirements for substitutions and the following, as applicable:
 - a. Statement indicating why specified materials or product cannot be provided.
 - b. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by Owner and separate contractors that will be necessary to accommodate proposed substitution.
 - c. Detailed comparison of significant qualities of proposed substitution with those of the Work specified. Significant qualities may include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
 - d. Product Data: including drawings and descriptions of products and fabrication and installation procedures.
 - e. Samples, where applicable or requested.
 - f. List of similar installations for completed projects with project names and addresses and names and addresses of architects and owners.
 - g. Material test reports from a qualified testing agency indicating and interpreting test results for compliance with requirements indicated.
 - h. Research/evaluation reports evidencing compliance with building code in effect for Project, from a model code organization acceptable to authorities having jurisdiction.
 - i. Detailed comparison of Contractor's Construction Schedule using proposed substitution with products specified for the Work, including effect on the overall Contract Time. If specified product or method of construction cannot be provided within the Contract Time,

- include letter from manufacturer, on manufacturer's letterhead, stating lack of availability or delays in delivery.
 - j. Cost information, including a proposal of change, if any, in the Contract Sum.
 - k. Contractor's certification that proposed substitution complies with requirements in the Contract Documents and is appropriate for applications indicated.
 - l. Contractor's waiver of rights to additional payment or time that may subsequently become necessary because of failure of proposed substitution to produce indicated results.
3. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within seven (7) calendar days of receipt of a request for substitution. Architect will notify Contractor of acceptance or rejection of proposed substitution within fifteen (15) calendar days of receipt of request, or seven (7) calendar days of receipt of additional information or documentation, whichever is later.
- a. Form of Acceptance: Change Order
- C. Comparable Product Requests: Submit three (3) copies of each request for consideration. Identify product or fabrication or installation method to be replaced. Include Specification Section number and title and Drawing numbers and titles.
- 1. Architect's Action: If necessary, Architect will request additional information or documentation for evaluation within one (1) week of receipt of a comparable product request. Architect will notify Contractor of approval or rejection of proposed comparable product request within fifteen (15) calendar days of receipt of request, or seven (7) calendar days of receipt of additional information or documentation, whichever is later.
 - a. Form of Approval: As specified in Division I Section "Submittal Procedures."
 - b. Use product specified if Architect cannot make a decision on use of a comparable product request within time allocated.
- D. Basis-of-Design Product Specification Submittal: Comply with requirements in Division I Section "Submittal Procedures." Show compliance with requirements.

1.5 QUALITY ASSURANCE

- A. Compatibility of Options: If Contractor is given option of selecting between two or more products for use on Project, product selected shall be compatible with products previously selected, even if previously selected products were also options.

1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle products using means and methods that will prevent damage, deterioration and loss, including theft. Comply with manufacturer's written instructions.
- B. Delivery and Handling:
 - 1. Schedule delivery to minimize long-term storage at Project site and to prevent overcrowding of construction spaces.
 - 2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
 - 3. Deliver products to Project site in an undamaged condition in manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting, and installing.
 - 4. Inspect products on delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.

5. Promptly return damaged shipments or incorrect orders to manufacturer.
6. For materials or equipment to be reused or salvaged, use special care in removal, storage and reinstallation to insure proper function in completed work.

C. Storage

1. Store materials in a manner that will not endanger Project structure.
2. Store products that are subject to damage by the elements, under cover in a weathertight enclosure above ground, with ventilation adequate to prevent condensation.
3. Store cementitious products and materials on elevated platforms.
4. Store foam plastic away from exposure to sunlight, except to extent necessary for period of installation and concealment.
5. Comply with product manufacturer's written instructions for temperature, humidity, ventilation and weather-protection requirements for storage.
6. Protect stored products from damage and liquids from freezing.

1.7 PRODUCT WARRANTIES

- A. Warranties specified in other Sections shall be in addition to, and run concurrent with, other warranties required by the Contract Documents. Manufacturer's disclaimers and limitations on product warranties do not relieve Contractor of obligations under requirements of the Contract Documents.
1. Manufacturer's Warranty: Preprinted written warranty published by individual manufacturer for a particular product and specifically endorsed by manufacturer to Owner.
 2. Special Warranty: Written warranty required by or incorporated into the Contract Documents, either to extend time limit provided by manufacturer's warranty or to provide more rights for Owner.
- B. Special Warranties: Prepare a written document that contains appropriate terms and identification, ready for execution. Submit a draft for approval before final execution.
1. Manufacturer's Standard Form: Modified to include Project-specific information and properly executed.
 2. Refer to Divisions 2 through 16 Sections for specific content requirements and particular requirements for submitting special warranties.
- C. Submittal Time: Comply with requirements in Division I Section "Closeout Procedures."

PART 2 – PRODUCTS

2.1 PRODUCT SELECTION PROCEDURES

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, that are new at time of installation.
1. Provide products complete with accessories, trim, finish, fasteners, and other items needed for a complete installation and indicated use and effect.
 2. Standard Products: If available, and unless custom products or nonstandard options are specified, provide standard products of types that have been produced and used successfully in similar situations on other projects.
 3. Owner reserves the right to limit selection to products with warranties not in conflict with requirements of the Contract Documents.
 4. Where products are accompanied by the term, "as selected," Architect will make selection.
 5. Where products are accompanied by the term, "match sample," sample to be matched is Architect's.

6. Descriptive, performance, and reference standard requirements in the Specifications establish “salient characteristics” of products.
7. Or Equal: Where products are specified by name and accompanied by the term, “or equal” or “or approved equal” or “or approved,” comply with provisions in Part 2 “Comparable Products” Article to obtain approval for use on an unnamed product.

B. Product Selection Procedures:

1. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements.
2. Products: Where Specifications include a list of names of both products and manufacturers, provided one of the products listed that complies with requirements.
3. Product Options: Where Specifications indicate that sizes, profiles, and dimensional requirements on Drawings are based on a specific product or system, provide the specified product or system. Comply with provisions in Part 2 “Product Substitutions” Article for consideration of an unnamed product or system.
4. Basic-of-Design Product: where Specifications name a product and include a list of manufacturers, provide that specified product or a comparable product by one of the other named manufacturers. Drawings and Specifications indicate sizes, profiles, dimensions, and other characteristics that are based on the product named. Comply with provisions on Part 2 “Comparable Products” Article for consideration of an unnamed product by the other named manufacturers.

2.2 PRODUCT SUBSTITUTIONS

- A. Timing: Architect and Owner will consider requests for substitution if received within 35 days after the Notice to Proceed. Requests received after that time may be considered or rejected at the discretion of the Owner and Architect.
- B. Conditions within substitution time: Architect and Owner will consider Contractor’s request for substitution when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements:
 1. If the substitutions are proposed by Contractor and are approved by Architect and Owner, Contractor shall assume all costs required to make necessary revisions and modifications to the design, including additional costs to Owner, Architect and their Consultants for evaluation of revisions and modifications of the design resulting from the substitutions submitted by Contractor to Architect.
 2. Requested substitution does not require extensive revisions to the Contract Documents.
 3. Requested substitution is consistent with the Contract Documents and will produce indicated results.
 4. Substitution request is fully documented and properly submitted.
 5. Requested substitution will not adversely affect Contractor’s Construction Schedule.
 6. Requested substitution is received necessary approvals of authorities having jurisdiction.
 7. Requested substitution is compatible with other portions of the Work.
 8. Requested substitution has been coordinated with other portions of the Work.
 9. Requested substitution provides specified warranty.

2.2 COMPARABLE PRODUCTS

- A. Conditions: Architect will consider Contractor’s request for comparable product when the following conditions are satisfied. If the following conditions are not satisfied, Architect will return requests without action, except to record noncompliance with these requirements.

1. Evidence that the proposed product does not require extensive revisions to the Contract Documents, that it is consistent with the Contract Documents and will produce the indicated results, and that it is compatible with other portions of the Work.
2. Detailed comparison of significant qualities of proposed product with those named in the Specifications. Significant qualities include attributes such as performance, weight, size, durability, visual effect, and specific features and requirements indicated.
3. Evidence that proposed product provides specified warranty.
4. List similar installations for completed projects with project names and addresses and names and addresses of architects and owners, if requested.
5. Samples, if requested.

PART 3 – EXECUTION

3.1 SUBSTITUTION REQUEST FORM

- A. For proposed product substitutions, copy the attached form, titled Material/Product Substitution Request, and submit as previously noted.

PART 4 – MEASUREMENT AND PAYMENT

- 4.1 Separate measurement or payment will not be made for work required under this Section. All costs in connection with the work specified herein will be considered to be included with the related item of work in the Schedule of Values, incorporated into the General Conditions or incidental to the Work of this Contract.

END OF SECTION 01 60 00

MATERIAL / PRODUCT SUBSTITUTION FORM

Project: _____ Date _____

A. We hereby submit for your consideration the following product instead of the specified item:

1. Section _____ Subarticle _____
2. Specified Item _____
3. Proposed Substitution (Mfg., Type, Model, etc.) _____

B. Complete all of the following:

1. Does this substitution offer the Owner a cost credit (including costs for changes by other trades)? _____ How much? _____
2. Does this substitution offer earlier delivery or less construction time? _____
How much and why? _____
3. How does this substitution affect any dimensions, layout, or details of other trades as shown on the drawings? _____

4. What are the specific differences between this substitution and the specified item? _____

C. Attach the following items as applicable:

Check if applicable

- | | |
|---|-------|
| 1. Manufacturer's technical data | _____ |
| 2. Laboratory test or performance results | _____ |
| 3. Drawings & wiring diagrams of the proposed product | _____ |
| 4. Drawings & description of changes required by other trades | _____ |
| 5. Samples | _____ |
| 6. Manufacturer's guarantee & maintenance instructions | _____ |
| 7. Documentation of code compliance for all specified uses | _____ |

D. The undersigned agrees to pay for all additional review, design, testing, changes in the contract documents, and construction as a result of the acceptance of this substitution, at no cost to the Owner.

E. Submitted by (Firm) _____

Signature _____ Date _____

F. Accepted _____ Rejected _____ Revise and Resubmit _____ See Attached _____

By Owner: _____ Date _____

By Architect _____ Date _____